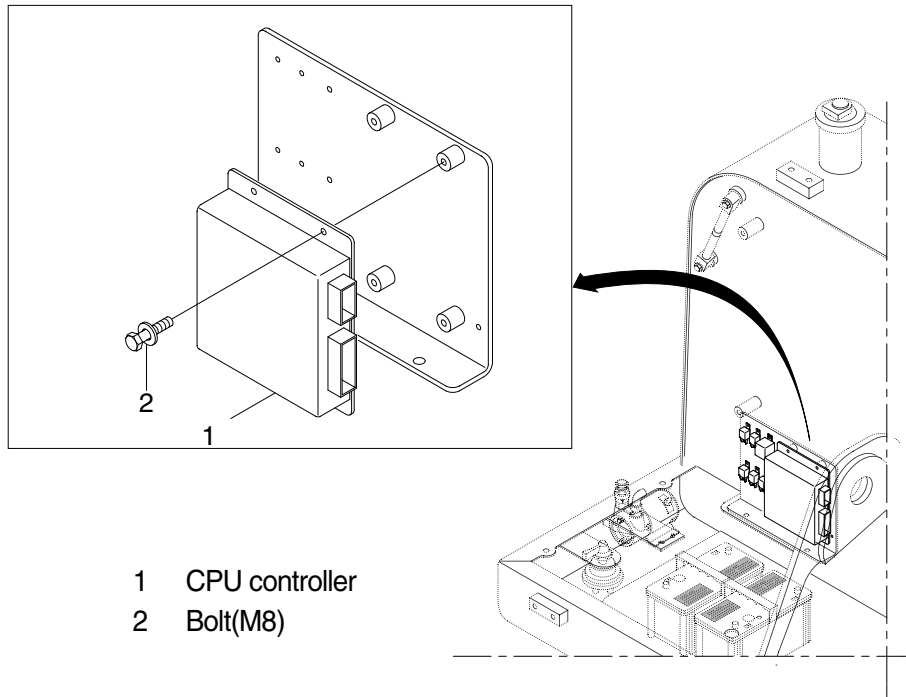


GROUP 8 ENGINE CONTROL SYSTEM

1. CPU CONTROLLER MOUNTING



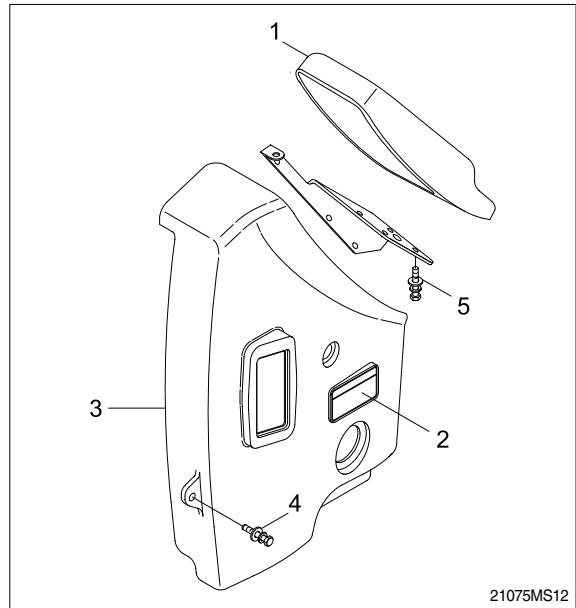
7075MS12

2. CPU CONTROLLER ASSEMBLY

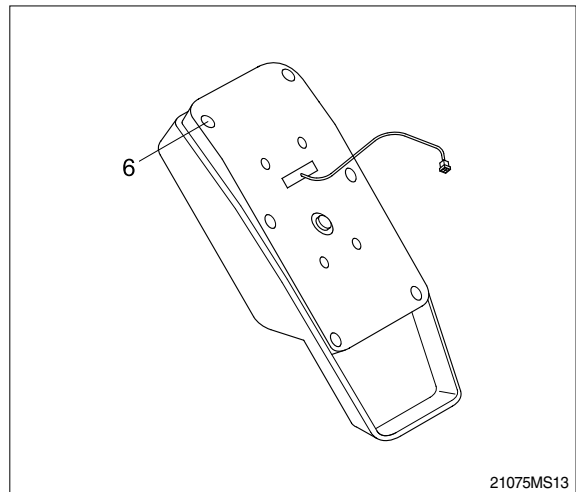
- 1) Disconnect 2 connectors from CPU controller.
- 2) Remove four pieces of bolt(2).
- 3) Remove 6 pieces of screw and open the cover of CPU controller.
- 4) Inspection : Check PCB(Printed Circuit Board)
 - (1) If any damage is found, replace CPU controller assembly.
 - (2) If not, but CAPO system does not work please report it to HHI dealer or A/S department.

3. EXCHANGE METHOD OF THE ROM

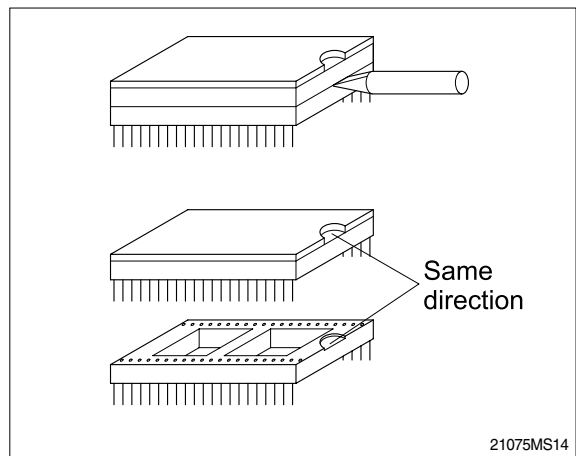
- 1) Disassemble the ash tray(2).
- 2) Disassemble the wiper motor cover(3).
- 3) Disassemble the cluster(1).



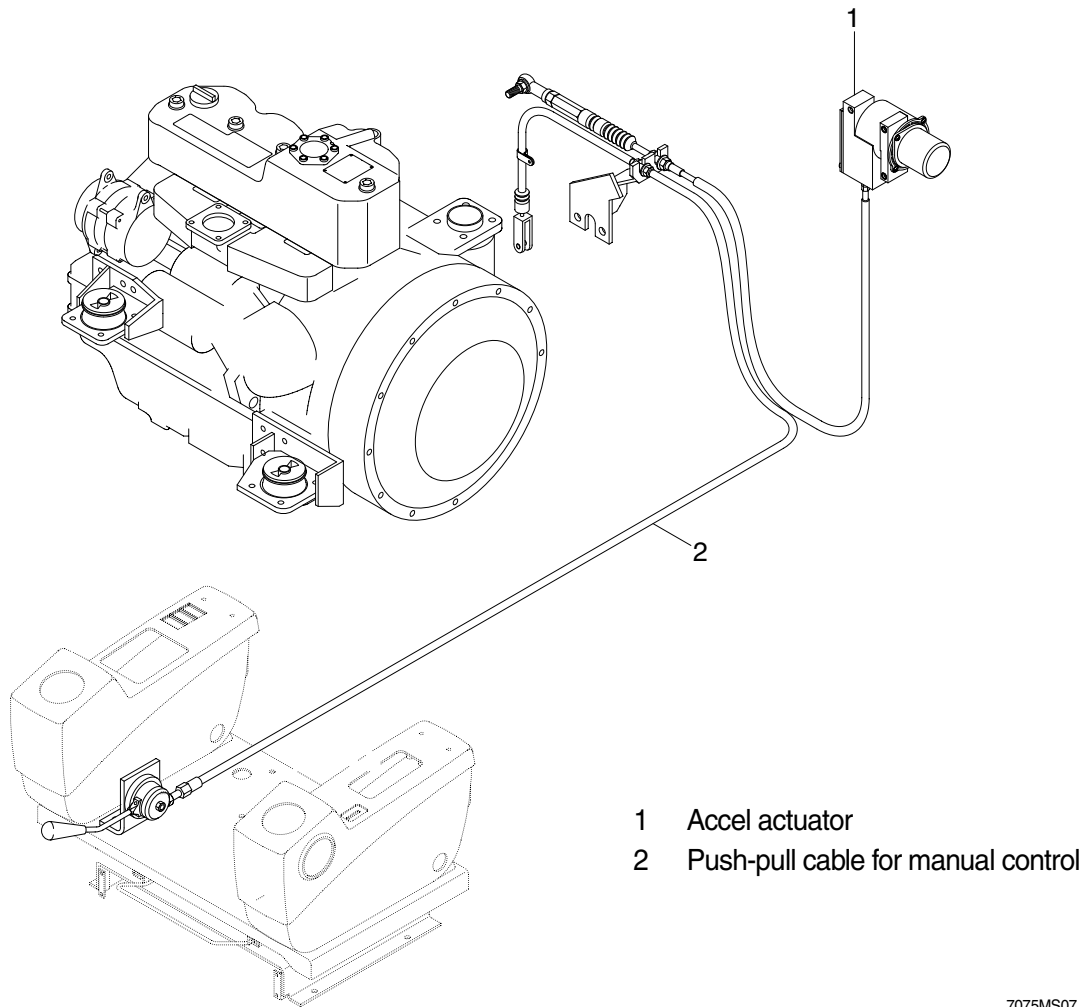
- 4) Loosen the screws(6EA) located back of the cluster.
- 5) Then you can open the upper case of the cluster easily.



- 6) Install the new ROM.(Be careful of direction and assmelbe the cluster in the reverse order to removal).

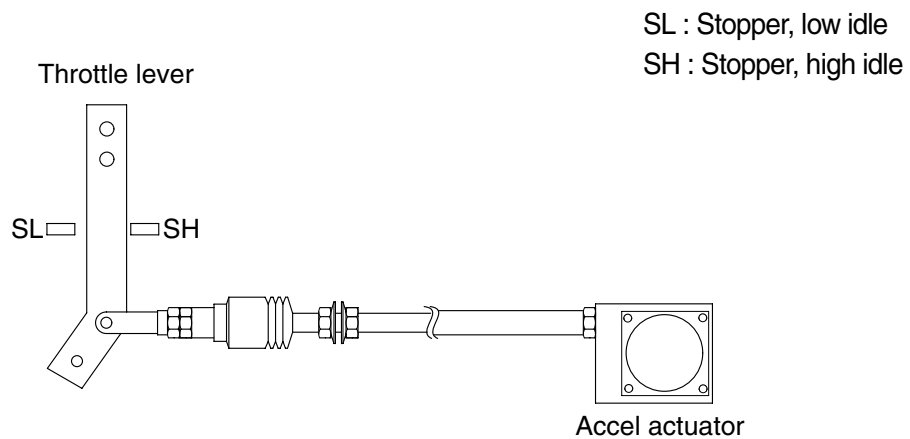


4. ENGINE ACCEL ACTUATOR



7075MS07

1) ENGINE THROTTLE LEVER

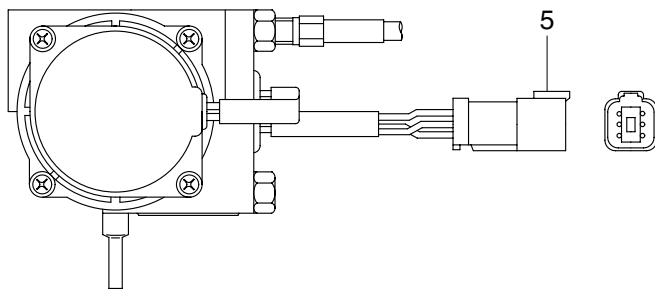
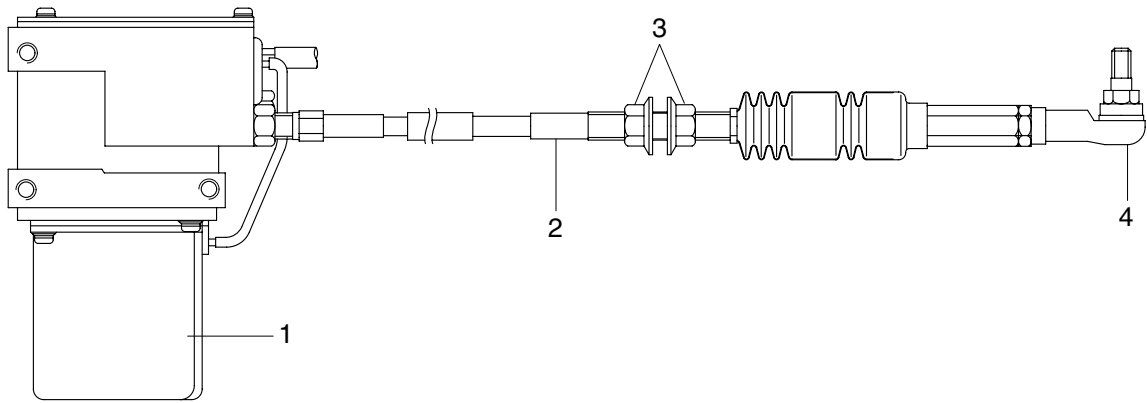


(140W-7) 5-18(2)

2) EMERGENCY CABLE (Push-pull cable)

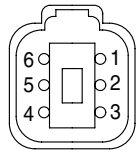
It controls engine speed by connecting onto the lever of the injection pump when the malfunction of the CPU controller or the accel actuator happen.

3) ACCEL ACTUATOR



- 1 DC motor
- 2 Cable
- 3 Nut
- 4 Ball joint
- 5 Connector

(210-7) 5-19(1)

Connector		
Type	6P, female	
Line color & description	1	White(Potentiometer 5V)
	2	Blue(Potentiometer SIG)
	3	Black(Potentiometer GND)
	4	-
	5	Green(Motor+)
	6	Yellow(Motor -)
Inspection	Check resistance Spec : 1~2 Ω (Between No.5-6) 0.8~1.2kΩ (Between No.1-3)	

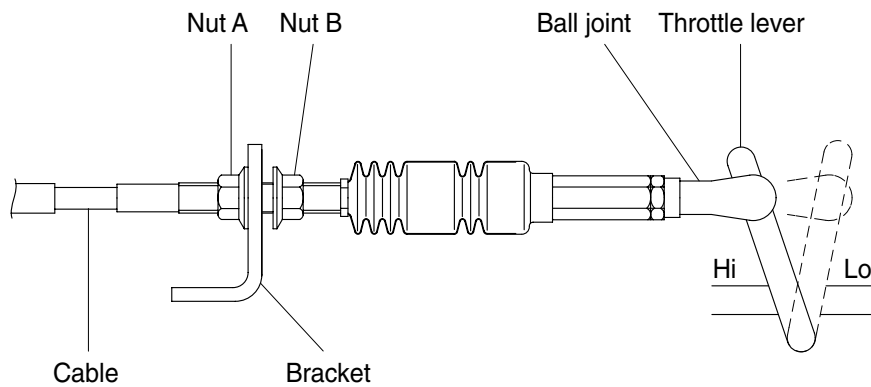
4) ACCEL ACTUATOR CABLE SETTING PROCEDURE

(1) Key ON

- ① Set the engine control dial max position and the one touch decel switch OFF.
- ② Connect the ball joint of cable to engine throttle lever.
- ③ Pull the cable to high stopper and put nut **A** edge to yoke of the bracket.
- ※ Make throttle lever not contact to the edge of high stopper.

(2) Key START

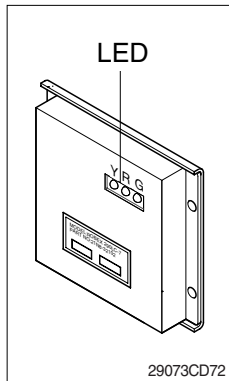
- ④ Confirm if the engine speed on cluster is same as each mode specification.
- ⑤ If the engine speed displayed on cluster is higher than each mode specification, then turn the nut **A** to counter clockwise and make the engine speed same to each mode specification.
- ⑥ If the engine speed displayed on cluster is lower than each mode specification, then turn the nut **A** to clockwise and make the engine speed same to each mode specification.
- ⑦ Turn nut **B** to clockwise and fix the cable to bracket.



130W5MS05

Mode	RPM
H	2200 ± 50
S	2050 ± 50
L	1900 ± 50
Key start(one touch decel)	1050 ± 100

5. CPU CONTROLLER



(1) To match the engine torque with the pump absorption torque, CPU controller varies EPPR valve output pressure, which control pump discharge amount whenever feedbacked engine speed drops under the reference rpm of each mode set.

(2) Three LED lamps on the CPU controller display as below.

LED lamp	Trouble	Service
G is turned ON	Normal	-
R is turned ON	Trouble on CPU	<ul style="list-style-type: none"> · Change the controller
G and Y are turned ON	Trouble on serial communication line	<ul style="list-style-type: none"> · Check if serial communication lines between controller and cluster are disconnected
Three LED are turned OFF	Trouble on CPU controller power	<ul style="list-style-type: none"> · Check if the input power wire (24V, GND) of controller is disconnected · Check the fuse

G : green, R : red, Y : yellow